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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,145	09/30/2003	Un Nyoung Sa	054358-5014	3831
9629	7590	07/13/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			NGUYEN, THANH NHAN P	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/673,145	Applicant(s) SA ET AL	
	Examiner (Nancy) Thanh-Nhan P. Nguyen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As amended, claims 1-4 contains new matter, which was not described in the specification, as "wherein the pixel electrode overlaps the data line."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung et al U.S. Patent Application Publication No. 2004/0090566 in view of Arakawa et al U.S. Patent No. 6,621,550, and further in view of Gu et al U.S. Patent No. 6,359,672.

Referring to claim 1, Jung et al discloses a liquid crystal display device, comprising: a transparent insulating substrate (10); a gate line (22) and a gate electrode (24) on the transparent insulating substrate; a gate insulating film (30), an active layer (42), an ohmic contact layer (55, 56), source (65) and drain electrodes (66), and a data line (62) on the transparent insulating substrate; a passivation film (72) formed on the transparent insulating substrate including the source and drain electrodes and the data line, [see fig. 3].

Jung et al lacks disclosure of a compensation film formed on the passivation film; and a pixel electrode formed on at least the compensation film.

Arakawa et al discloses a compensation film (110) formed on the passivation film (120); and a pixel electrode (111) formed on at least the compensation film, [see fig. 7], for the benefit of having a clear moving image displayed, and a screen with a high contrast, [see col. 7, lines 58-59]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a compensation film formed on the passivation film, and a pixel electrode formed on at least the compensation film for the benefit of having a clear moving image displayed, and a screen with a high contrast.

Jung et al further lacks disclosure of the pixel electrode overlaps the data line.

Gu et al discloses the pixel electrode (3) overlaps the data line (5), [fig. 1], for the benefit of increasing the pixel aperture ratio (or pixel opening size) of the liquid crystal display, [col. 5, lines 41-44]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the pixel electrode

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overlaps the data line for the benefit of increasing the pixel aperture ratio (or pixel opening size) of the liquid crystal display.

Referring to claim 2, Jung et al discloses the pixel electrode (82) includes ITO, [see paragraph 0050].

Claim 3 is met the discussion regarding claim 1 rejection above.

Claim 4 is met the discussion regarding claim 2 rejection above.

Claims 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al U.S. Patent No. 6,582,862 in view of Abileah et al U.S. Patent No. 5,499,126.

Referring to claim 5, Nakamura et al discloses a liquid crystal display device comprising a transparent insulating substrate (5); a black matrix (6) formed on the transparent insulating substrate; a color filter layer (7R, 7G, 7B) formed on an upper surface of the black matrix, an overcoat film (8) on the color filter layer, and a common electrode (9), [see fig. 1].

Nakamura et al lacks disclosure of a compensation film formed on the overcoat film; a common electrode formed on the compensation film.

Abileah et al discloses a compensation film (67, 68, 70) formed on the color filter layer (42, 44, 46); and a common electrode (64) formed on the compensation film for the benefit of eliminating color leakages and maximizing the field of view of the display,

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[see col. 1, lines 8-9]. Since above the color filter usually has an overcoat to protect the color filter layers, and to flatten the color filter layer as seen in fig. 1 of Nakamura et al reference, combining with secondary reference (Abileah), a compensation film would be formed on the overcoat film. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a compensation film formed on the overcoat film, and a common electrode formed on the compensation film for the benefit of eliminating color leakages and maximizing the field of view of the display.

Referring to claim 6, Nakamura et al discloses wherein an overcoat film (8) has a planar upper surface, [fig. 1], and would be formed between the color filter layer and the compensation film as discussed in claim 5.

Referring to claim 7, Nakamura et al discloses the common electrode includes ITO, [see col. 30, lines 58-59].

Claims 8 and 11 are met the discussion regarding claim 5 rejection above.

Claim 9 is met the discussion regarding claim 6 rejection above.

Claim 10 is met the discussion regarding claim 7 rejection above.

Claims 12-16 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abileah et al U.S. Patent No. 5,499,126 in view of Nakamura et al U.S. Patent No. 6,582,862.

Referring to claims 12, Abileah et al discloses a liquid crystal display device, comprising: a thin film transistor substrate (34); a pixel electrode (36) formed on the thin film transistor substrate; a color filter substrate (40); a common electrode (64) formed on the color filter substrate; a liquid crystal material (38) formed between the thin film transistor substrate and the color filter substrate; and a compensation film (67,68,70) at least disposed between on one of the pixel electrode and the thin film transistor substrate to contact the pixel electrode, and the common electrode and the color filter substrate), wherein the compensation film compensates for phase variations of light transmitted through the liquid crystal material, [fig. 19].

Abileah et al lacks disclosure of a black matrix on color filter substrate. However, it was well known to have black matrix formed on the color filter substrate, between color filter layers for preventing leakage light, as evidenced by Nakamura et al, [fig. 1]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a black matrix on color filter substrate for the benefit of preventing leakage light.

Referring to claims 13-16, Abileah et al lacks disclosure of an overcoat film formed between the compensation film and a color filter film on the color filter substrate; wherein the overcoat film is formed between red, green, and blue color filter layers of the color filter film, the overcoat film contacts a black matrix formed between the red, green, and blue color filter layers, and the overcoat film contacts the red, green, and blue color filter layers.

Nakamura et al discloses an overcoat film (8) formed on a color filter film (7R, 7G, 7B) on the color filter substrate; wherein the overcoat film is formed between red, green, and blue color filter layers of the color filter film, the overcoat film contacts a black matrix (6) formed between the red, green, and blue color filter layers, and the overcoat film contacts the red, green, and blue color filter layers, [fig. 1], for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter, [see col. 2, lines 4-5]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an overcoat film formed on a color filter film on the color filter substrate; wherein the overcoat film is formed between red, green, and blue color filter layers of the color filter film, the overcoat film contacts a black matrix formed between the red, green, and blue color filter layers, and the overcoat film contacts the red, green, and blue color filter layers for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter.

Referring to claim 17, Abileah et al discloses a liquid crystal display device, comprising: a first substrate (34) including a plurality of pixel electrodes (36); a second substrate (40) including a common electrode (64), a color filter film (42, 44, 46); a liquid crystal material (38) formed between the first and second substrates; a compensation film (67, 68, 70) formed beneath the common electrode, [fig. 19].

Abileah et al lacks disclosure of a black matrix formed on second substrate. However, it was well known to have black matrix formed on the color filter substrate,

between color filter layers for preventing leakage light, as evidenced by Nakamura et al, [fig. 1]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a black matrix on color filter substrate for the benefit of preventing leakage light.

Abileah et al further lacks disclosure of an overcoat film on the color filter film; wherein the overcoat film directly contacts the color filter film and the compensation film.

Nakamura et al discloses an overcoat film (8) on the color filter film (7R, 7G, 7B), [fig. 1], for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter, [see col. 2, lines 4-5]. Also, combining Abileah et al reference [fig. 19] with Nakamura et al reference [fig. 1], the overcoat film would be directly contacted the color filter film and the compensation film. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an overcoat film on the color filter film, wherein the overcoat film directly contacts the color filter film and the compensation film for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter.

Claim 19 is met the discussion regarding claim 17 rejection above.

Referring to claims 18, and 20-21, Abileah lacks disclosure of an upper surface of the overcoat film is planar; the overcoat film directly contacts the black matrix.

Nakamura et al discloses an upper surface of the overcoat film (8) is planar; and the overcoat film directly contacts the black matrix (6), [fig. 1], for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter, [see col. 2, lines 4-5]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an upper surface of the overcoat film is planar; and the overcoat film directly contacts the black matrix for the benefit of protecting the color layer and for flattening the color filter in the case a color layer is provided in the color filter.

Response to Arguments

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 11, 2005



DUNG T. NGUYEN
PRIMARY EXAMINER